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Abstract

In Chapter 2, Gorli, Mengis and Liberati focus on an innovation – the one towards patient-centred care – that has gained prominence in recent healthcare reforms. Drawing on data from an ethnographic study, the authors focus on the spatial translation of the innovation; that is, the process through which a large, multi-specialty hospital was redesigned and rebuilt to enact a new care paradigm. The findings show that different aspects of the organizational space affected the ways in which the concept of patient-centredness was translated into practice. These included the architectural trends that informed the hospital design, the new material walls that shaped the organization of medical wards, and the way in which the new space was experienced by organizational actors (staff, patients and family members). The authors propose that, when innovative ideas and care paradigms are translated into practice, the role of organizational space (including its material, symbolic, practised and lived qualities) should be considered carefully.

2

A New Space for Patients – How Space Enters Innovation Translation Processes

Mara Gorli, Jeanne Mengis
and Elisa Giulia Liberati

2.1 Introduction

The shift towards patient-centredness provides an interesting case to analyze innovation processes in healthcare, given its successful "global travel" (Nicolini et al. 2016) and its prominence in recent healthcare reforms and policies (Berwick 2009; Institute of Medicine 2001).

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Patient-centredness calls for a re-humanization of medicine by taking into account the patients' preferences, needs and values in clinical decisions (Institute of Medicine 2001). To be successful in this quest, healthcare services should foster the active participation and involvement of patients and, at the organizational level, redesign care delivery processes to overcome disciplinary silos and address patients' care needs in an integrated fashion. Accordingly, hospitals in many European countries and beyond have started to organize patient care according to patients' overall health conditions rather than their prevalent pathology. This has materialized in organizational restructuring programmes, which aim to integrate specialized clinical competences into multidisciplinary teams and wards to overcome the traditional, specialty-based, functional model (Lega 2008; Lega and DePietro 2005; McKee and Healy 2002; Vos et al. 2011; Villa et al. 2009).

We build on Actor Network's argument that innovations (such as the shift towards the patient centred care paradigm) are not exclusively adopted by organizations because of their rational advantages (Rogers 1995). Rather, the process through which innovations gain popularity and spread is based on multiple actors taking on, debating or even defying the innovation, or aligning the innovations to the specific needs of an organization (Akrich et al. 2002; Latour 1984).

The underlying principle is that an innovation becomes such only once a new solution is *brought into use* (see also the introduction to this volume). Accordingly, it is important to examine the *local translation process* (Akrich et al. 2002; Latour 1984) through which innovative ideas and approaches, such as patient-centred care, become practised or brought into use in hospitals.

To date, only few studies have focused on how "patient centredness moves from theory to practice" in hospitals (Bromley 2012: 1065) and the challenges entailed in this process (Gilmour 2006; Liberati et al. 2015). We know, for example, that placing the patient at the centre of care is a process that interlaces with the professional identities at play and thus may collide with inter-professional power dynamics (Liberati et al. 2015).

In this chapter, we focus on one specific aspect that we argue is central when translating (healthcare) innovations into practice, namely organizational space. Although the translation of innovations is acknowledged to be

a "social and material process" (Nicolini 2010: 1011), the processes underpinning the 'spatial' translation of patient-centredness have hardly been considered. Our contribution will examine, specifically, how ideas of patient-centredness are translated materially into the spatial redesign of hospitals and how, in turn, these spaces affect the way patient-centredness becomes practised.

The literature on patient-centredness generally suggests that patient-centredness needs an "enabling context", yet this context has been addressed mainly in procedural, cultural or professional terms (e.g. Bergeson and Dean 2006). Only a few scholars have investigated the role of the arrangement of the spatial environment in implementing patient-centredness. From a design perspective, it has been suggested that patient-centredness can be achieved, for example, by creating healthcare spaces dedicated to doctor-patient encounters or reinforcing inter-disciplinary work and care integration (Li and Robertson 2011; Liu et al. 2014). Patient centredness also seems to entail to creation of "healing spaces" (Arneill and Frasca-Beaulieu, 2003; Frampton and Goodrich 2014; Frampton et al. 2008; Schweitzer et al. 2004; Gesler 1992; Milligan et al. 2004). Whilst this research focuses on the design of organizational space, few studies – to our knowledge – have empirically addressed the role of organizational space in practising patient-centredness. Examples include Bromley (2012), Gilmour (2006) and Liberati et al. (2015). Bromley (2012) suggested that, in the hospital where the study took place, a healing space was created by moving "offstage" what was normally associated with a hospital space – i.e. hiding most of the hospital equipment, signage or staff infrastructure from the patients and their families. Liberati et al. (2015) found that, despite hospital practitioners' declared and honest commitment towards patient centred care, the persistence of some taken-for-granted routines meant that patients experienced a limited freedom of movement, limited access to space and information, and limited possibilities to manage their own time. This was indicative of a tension between the patient-centred *place* and the professional-centred *space,* as continually re-constructed by the practices of organizational actors (cp. Kearns and Joseph 1993). Gilmour (2006), in turn, found that nurses' efforts to configure the hospital as a familiar space for patients could also be interpreted as an attempt to protect and carve out nurses' territory in the hospital.

Building on these initial indications, we aim to take organizational space to the analytical fore and analyze the spatial mediation of the translation of patient-centred care. By bridging theories on innovations' translation and the literature on organizational space (Beyes and Steyaert 2012; Clegg and Kornberger 2006; Hernes et al. 2006; Taylor and Spicer 2007; Van Marrewijk and Yanow 2010), we explore how the redesign of healthcare spaces is used to materialize ideas of patient-centredness and what happens when consolidated clinical practices resist and change these spatial translations of an innovation. Specifically, we ask (a) how patient-centredness translates into the spatial arrangements of the hospital and (b) how, in turn, clinical practitioners work with or around the new spatial setup by both taking up the patient-centredness discourse and working around the spatial arrangement.

To this end, we will approach the patient-centred innovations from the angle of space to contribute to the understanding of what happens when attempts to implement innovations are, literally, cemented in stone. We draw on an observational study of a large multi-specialty hospital that has been recently rebuilt according to a new patient-centred organizational model.

2.2 Theoretical Framework

2.2.1 Translating Innovation in Practice – The Role of Material Mediation

"To adopt an innovation is to adapt it" (Akrich et al. 1988). With this simple formula, Actor Network Theory challenged the frequent assumption that one could simply implement a relatively linear innovation in a given context. An innovation is subject to continuous transformations and adaptions, as it is actively "translated" into practice (Akrich et al. 2002; Latour 1987). The translation does not only involve the adjustment of the new solution technically, but also the transformation of multiple interests. In fact, while an innovation needs to attract the interest of a wide range of (organizational) actors promising to solve their pressing problems, it becomes necessarily confronted with multiple

interests, controversies and forms of critique. Negotiations ensue from what the innovation can or needs to achieve and how it can address the various interests that draw the innovation into multiple directions (moments that Callon also called "problematization" and "intéressement", 1986). An innovation finally gains some stability when it becomes clearer (through multiple tests, prototyping or experimenting) what form the innovation will take in a specific organizational context, who the relevant actors will be, and what their roles will be for the innovation (Latour 1987). This moment of stabilization has also been called *embodiment*, as networks of actors and the objects materialize (Callon 1986).

In the context of healthcare (and beyond), scholars have elaborated in quite some detail on the ways in which the translation of innovation unfolds (Ansari et al. 2014; Bartel and Garud 2009; Black et al. 2004; Dopson and Fitzgerald 2005; Hoholm and Olsen 2012; Nicolini 2010; Nicolini et al. 2016). We know, for example, that for an innovation to be translated into practice, it is important that it serves multiple concerns (Nicolini 2010), and that innovation narratives link past innovation efforts with present and future ones (Bartel and Garud 2009). Creative processes of "figuration" (Dopson 2005) and more political boundary-work (Mørk et al. 2012; Liberati et al., 2016) are also at play, which influence the shape innovation will take in specific work environments. Even controversies, contradictions and frictions (Hoholm and Olsen 2012) may fuel (and not only hinder) the translation of an innovation, as they not only "pepper an innovation's life", but also represent important tests of legitimacy, providing strength to certain solutions but not others (Akrich et al. 2002: 224).

There is a growing acknowledgement that not only discursive, but also material dynamics are at work when translating an innovation into practice (cp. Engestrom 1995; Koivisto et al. 2015; Maller 2015; Nicolini et al. 2016). Nicolini (2010), for example, analyzed how telemonitoring was translated into medical practice in northern Italy. The study showed that the innovation required not only to align the multiple interests in, and discourses on, the monitoring of heart patients from a distance, but also to find concrete, material solutions to the many practical challenges that such an innovation represented (e.g. identify

low-cost, portable ECGs, improve telephone links to the call centre, make alliance with a medical foundation to widen the network of consultable cardiologists, improve nurses' knowledge of identifying technical connection problems, etc.) (Nicolini 2010). This suggests that technical machinery, objects of representation, artefacts and other material actors play an essential role in the translation of innovations.

We argue that an important yet rarely addressed aspect of this material translation is organizational space. For new solutions to be practised, innovations often require new spatial arrangements, or they require managers to change the spatial surrounding in an attempt to turn the innovation into an organizational reality. Yet, even in the case of telemonitoring above (whereby the innovation in itself expanded the 'space' of care delivery), space was not foregrounded analytically. In the following section, we present one specific view in the growing literature on organizational space (Beyes and Steyaert 2012; Clegg and Kornberger 2006; Taylor and Spicer 2007; Van Marrewijk and Yanow 2011), namely Lefebvre's spatial triad, which we suggest will help us address how space mediates the process of translating innovations into practice.

2.2.2 The Role of Organizational Space in Translating Innovations

The relatively recent "spatial turn" in organization studies (Beyes and Steyaert 2012; Clegg and Kornberger 2006; Taylor and Spicer 2007; Van Marrewijk and Yanow 2010) accounted for the roles of space in shaping and understanding organizational phenomena. A central distinction in the organizational space literature is Lefebvre's influential "spatial triad". Lefebvre (1991: 33) argued that space is produced through the interaction of three processes, which he called "moments" of space, namely conceived, perceived and lived space (Taylor and Spicer 2007: 335). We "conceive" space through urban, architectural or office related plans, "perceive" space through practices of moving and interacting in space (e.g. doctors doing rounds), and "live" space by

imagining and making sense of the experiences of space (e.g. in artistic, narrative or scientific representations).

For Lefebvre (1991), the *conceived space*, i.e. the planned space in documents and architectural designs, is the dominating sphere, where planners, architects or mangers exert "order" or control through specific spatial configurations (see also Taylor and Spicer 2007: 331). For example, hospital designers create their hospital plans following the design principles of residentialism (Verdberber and Refuerzo 2006), foregrounding human inhabitation, social interaction and fluid person-nature transactions as well as de-emphasizing the presence of technology (pp. 33–36). These ideas inform the conceived space, i.e. the plans of the hospital spaces, and then become materialized through bricks and cement (e.g. the patient rooms are devoid of material equipment, which is located in other rooms); thus, they exert a certain power over how the clinicians, patients and other hospital users will practise (perceived space) and make sense of the hospital space (lived space).

Perceived space is produced through the everyday "spatial practice" of its inhabitants, in our case the nurses and doctors. For example, in a psychiatric ward, perceived space is produced by the way nurses practically use an increase of more "private", social and regenerative spaces to interact with each other and with patients (cp. Tyson et al. 2002). Perceived space is thus produced "slowly and surely as [employees] master [. . .] and appropriate [. . .] it" (p. 38).

Lefebvre (1991) is careful not to fuel another dualism between the cognitive (of the conceived) and the material (of the practised, i.e. perceived space), which is why he insists on space's third moment, namely the *lived space*. Lived space is the space as "made sense of" by its inhabitants and users. In the example of the psychiatric ward above, lived space refers to how nurses feel about the spatial changes of their ward, for example, whether or not they live the increase of private spaces as a positive force for the therapeutic milieu.

Lefebvre's triad is useful to understand the translation of an innovation in and through the space, as he reminds us to be attentive not only to how the ideas that inform an innovation are built into the physical or material space (as planned by managers and architects), but also to how space is practised (i.e. perceived space)

and how practitioners, through verbal and visual signs or symbols, attempt to re-appropriate and make space meaningful for them (i.e. lived space). There might be important differences – and even tensions – between the way a space is conceived, perceived or practised and the way in which it is lived or made sense of. In other words, from a spatial point of view, it is necessary to understand not only how an innovation is cemented in stone, but also how this space is practised - thus becoming "le lieu pratiqué" (De Certeau, 1990, pp. 172–173). Hatch (1987), for example, though not making an explicit reference to Lefebvre's triad, showed that open offices designed to increase collaboration by eliminating physical barriers (i.e. conceived space) did not increase - and in fact reduced - interactions between employees (i.e. perceived space). Lefebvre (1991) added to this that the practised space stands in continuous interaction with the lived space and that we need to pay attention to making space meaningful through signs and other representations. In fact, considerable differences and tensions may exist between the practised and the lived space. In the example of the psychiatric ward above, the perceived/practised space (e.g. the availability of more private rooms, interactions between nurses and patients increased) did not reflect the lived space, as nurses did not believe that the new ward arrangement had a significant impact on attempts to re-humanize the hospital (cp. Tyson et al. 2002).

2.3 The Context of Study and Methodological Framework

2.3.1 Context of the Study

Data for this chapter are drawn from an ethnographic study conducted in a hospital in Italy. At the time of the study, the hospital was undergoing an overall reorganization (informed by the patient-centred paradigm), the implementation of which included the relocation in a new building and relied heavily on a new architectonical design.

Many European hospitals have been historically organized around a 'functional' model. In this model, clinicians with a similar specialization are grouped into relatively independent units (e.g. paediatrics, gastroenterology, neurosurgery) and patients are hospitalized in units according to their prevalent pathology (Lega 2008; Vos et al. 2011). While the functional departments mirror the historical trend towards disciplinary specialization, current health-policy literature suggests that this may cause disruptions in patient care delivery (especially in view of comorbidities) and lead to economic and organizational inefficiencies that are unsustainable in the long term (Braithwaite 1993; Vera and Kunz 2007; Vos et al. 2011).

The Patient Centred Hospital Model (PCHM) has been introduced as a management innovation capable of overcoming the limitations of the functional model and delivering a more integrated patient-centred and cost-effective care (Lega and DePietro 2005; Vera and Kuntz 2007; Villa et al. 2009). As an organizational paradigm, the PCHM represents an attempt to redesign the care delivery process around the needs of the patients rather than around clinical disciplines. The core principle of the PCHM is the delivery of appropriate care to patients in a suitable setting according to their overall health conditions rather than their prevalent pathology. Pragmatically, this is achieved through hospital restructuring aimed at integrating specialized clinical competences to form multi-disciplinary teams and at regrouping patients into multi-disciplinary wards differentiated by the level of patients' clinical and nursing care needs (Lega and DePietro 2005; McKee and Healy 2002; Villa et al. 2009). This means that patients' placement into hospital units no longer overlaps with the what is defined as their "prevalent pathology" (or, a medical specialty). Rather, patients are grouped into multi-disciplinary areas according to an assessment of their overall health condition (inclusive of both their clinical and care needs).

Translating the PCHM into practice requires, among other things, the redesign of hospitals' spatial environment. In the early 2000s, several Italian regions started looking with interest at the PCHM as a comprehensive framework for increasing not only hospitals' patient-centred care, but also their effectiveness and efficiency in general. The

first official regulation concerning the introduction of this hospital model appeared in 2005 as a part of the Tuscany Regional Healthcare Plan (Law 40/2005). The 2005 law stated that within three years after the passing of the law, hospitals needed to present plans to gradually overcome the functional organization and place patients in the hospital in a way that can increase patient-centredness. The construction of new hospital buildings designed to realize patient-centredness has substantially accelerated this process. All over Italy, the changes followed external, policy-driven pressures and triggered a set of actions to prepare the personnel to cope with the restructuring.

2.3.2 Methodology – Exploring How the Innovation of "Patient-Centredness moves from Theory to Practice"

Following Bromley's suggestion to explore the consequences of the innovation "as patient centeredness moves from theory to practice" (Bromley 2012: 1065), we conducted an observational case study in a context where the PCHM was being implemented in a newly built hospital. Our data collection aimed to capture how clinicians and hospital managers interpreted the innovation and how the latter affected routine clinical practice. The data were collected within the first year following the relocation in the new hospital. We collected three sources of data:

1) Approximately 300 hours (45 days) of ethnographic observations in the new hospital spaces conducted between February and July 2014. We were attentive to professionals' attempts to adapt to the PCHM and to their reaction to the modes of working introduced by the new hospital model and structure.
2) Whenever possible, observations were integrated with conversations with frontline nurses and frontline doctors working in different hospital wards in the newly built 'patient-centred hospital'. These were aimed at capturing clinicians' understanding of the patient-centred model and its effects on their work life. On a few occasions,

we also engaged in brief conversations with patients to gather their opinions with respect to the inquired issues.

3) Five semi-structured qualitative interviews were conducted with senior management members (directors of nursing staff, the Chief of Medical Staff and other members of the hospital Board) between June 2013 and July 2014. The interviews included questions on the patient-centred innovation philosophy and care principles (e.g. *What are, in your opinion, the aims of this innovation?*), on the actions adopted locally to implement the patient-centred model (e.g. *How is the new model developed in your hospital? Which spaces, structures and activities have been affected and how?*) and on how the new hospital model affected the experiences of patients.

Observational and conversational field notes were transcribed and organized into three types of notes, observational, methodological and theoretical (Gobo 2008). Observational notes included rich description of relevant actions, interactions, spaces and other physical artefacts; methodological notes included reflections and potential changes in data collection methods; theoretical notes included hypothesis and provisional explanation of the observed events in the light of existing theoretical concepts.

The data were then analyzed following an inductive and thematic approach (Miles et al. 2014). We selected and coded the transcriptions derived from our interviews and field notes, iteratively looked for connections among codes, and progressively clustered the codes into emerging themes, focusing on the effect of the new hospital model on spaces and professional practices. Participants' statements were interpreted with respect to their role in the organization.

Following an inductive process, our analysis was not purely data driven. To shed light on the controversies of translating the notion of patient-centredness into practice, we introduced a number of theoretical concepts derived from the body of scholarship on organizational spaces (Clegg and Kornberger 2006; Van Marrewijk and Yanow 2011) and from the literature on innovation translation (Black et al. 2004; Hoholm and Olsen 2012; Nicolini 2010; Nicolini et al. 2016). Our analysis developed at the interface between the two conceptual realms. Yet, it is important to notice that we were not testing any predetermined model or hypothesis; rather,

the aforementioned theoretical concepts added more complexity to the existing ways of examining patient-centred innovations. The following section illustrates the outcome of this analytical process.

2.4 Findings

In this section, we present the findings from our observational study. We show how the concept of patient-centredness was translated into practice and what roles organizational space played in this process by structuring our findings into three sections. First, we introduce a number of ideas and concerns that emerged in response to the PCHM and which made the innovation not only attractive, but also highlighted possible conflicts. We then address how the hospital managers and architects translated the "idea" of patient-centredness into the concept of the new hospital spaces (what Lefebvre 1991 called "conceived space"). Third, we illustrate how these ideas and concerns, now "cemented in stone", led to specific ways of *practicing* and *living* the hospital, two "moments in space" which we found to be intimately entangled.

2.4.1 The (Multiple) Ideas and Concerns Informing the Introduction of Patient-Centred Care

The patient-centred innovation was introduced as part of a large, nationwide, political and economic agenda. When we explored the reasons behind the introduction of the PCHM, reference was often made to wider discourses aimed at increasing the efficiency and efficacy of hospitals. In fact, the PCHM was said to be introduced as a means to achieve the necessary reduction of costs and the improvement of the service, as the following quote from an interview suggests:

[Conversation with a Hospital Manager]

"It's quite simple if you think about it. In our previous hospital, every single ward had its own resources (materials such as drugs and medications, cleaning services, etc.) and therefore costs were duplicated constantly. Within this new model, we have centralized a lot of services and we can save resources for a different use."

The new organizational model promised not only to reduce the waste of resources, but also – concomitantly – to overcome several shortcomings of the functional model, such as the care fragmentation caused by the disease-centred approach. For example, according to various hospital managers, fragmentation could be overcome by strengthening the collaboration across hospital services, thus reducing hospitalization length and treatment costs.

Senior managers agreed that achieving patient-centredness required creating better integrated care pathways. In the light of the ever-present (and honourable) slogan that "patients' time is valuable too", attempts were made to reduce the patients' waiting time and the length of hospitalization. The rapidity and responsiveness of customer service as well as shifting the culture of care delivery towards a more thorough attention to patient and family comfort were substantial facets of the innovative idea. The following quote from a hospital manager illustrates how the new processes that were implemented as part of the PCHM innovation were expected to improve the flow, efficiency and quality of care delivery.

[Conversation with a Hospital Manager]

"I think patients' experience can really improve (. . .). For example, we have centralized the planning of all the elective surgeries performed in the hospital. This enhanced planning of the elective surgeries will allow us to call the patients two weeks before their surgery, rather than two days before as it used to be. (. . .) And all the reception services will be located in the same area. This means that if patients need a blood test plus other medical exams, they can do it in the centralized reception, rather than having to wander around the hospital and lose a lot of time . . . I think, it's just the beginning of it, but we are starting to be really at the service of patients here."

Beyond the practical benefits for the patient (e.g. coordination of multiple services needed) and for the clinical staff (e.g. planning surgeries), the quote suggests that the PCHM also involved a shift of power. The emphasis on planning and the centralization of services implied a growing importance attributed to managerial and administrative roles. In fact, the patient-centred model was also described as a shift away from a 'doctor-centred' model, whereby patients' placement in the hospital

was organized around medical specialties and care delivery often followed the interests of clinicians rather than patients. In the words of one of the senior hospital managers:

[Conversation with a Hospital Manager]

"We design with a completely flipped focus: clinicians no longer can decide, let's say, to visit the patient at 8 o'clock. It's the need of the patient that determines when things happen. (. . .) The hospital beds are the property of the patient, not of the ward managers."

The quote suggests that in order to improve the 'patient-centredness' of the delivered care, doctors' autonomy needs to be limited. Patient-centredness could only be achieved as a joint endeavour involving all hospital staff, including managers and administrators, and is certainly not the exclusive responsibility of the clinicians.

[Conversation with a Hospital Manager]

"Our desired aim would be to have people, patients and families, feeling welcomed and taken care of not only by doctors but also by the nurses, the administrative staff, by every hospital employee really. It's the overall experience that they should remember, not the specific doctor. We are really making an effort to discourage this doctor-centredness of the service. (. . .) It's a Copernican revolution really!"

The quote illustrates that the introduction of patient-centredness was not expected to be a smooth journey; rather, it implied a considerable political shift. Though the PCHM did not affect or constrain doctors' clinical responsibility towards patients, the model implied that 'patient-centredness' was not solely the outcome of doctor-patient interactions, but it was, in fact, a multi-professional and organizational achievement. The role of nurses, healthcare assistants, and administrative staff was conceived as equally important as that of doctors for delivering patient-centred care. The idea of a "Copernican revolution" foreshadowed the potential controversies to which this idea would be subjected.

In sum, multiple and partly conflicting interests converged around the introduction of the PCHM. On the one hand, the PCHM was described as serving the aim of reorganizing the service around the needs of the patient and, with this, strengthen the coordination between specializations, professional groups and service providers. On the other hand, the PCHM was also used as a promise to reduce costs, to improve

efficiency in the use of resources and to facilitate planning. The convergence of these multiple interests fuelled the attractiveness of PCHM, such that most hospital managers seemed very committed to the initiative. Yet, this convergence also had the potential to prompt conflicts of interests and power struggles amongst different organizational roles, all of which were subjected to the PCHM innovation. In sum, since the PCHM attracted multiple interests, translating the model into practice became a political process.

2.4.2 Conceiving Space for Patient-Centred Care

The shift towards the PCHM occurred together with the relocation into a new hospital structure. The 'old' hospital resembled a medieval town in which hospital departments were semi-independent buildings, each with their own entrance at the ground floor and facing a beautiful and spacious courtyard with a big fountain in the centre. Since the fountain was visible from all the hospital buildings, it worked as an immediate point of reference and helped patients' orientation. The hospital facility had two main gates, with the central one resembling a medieval portal that welcomed the patients and visitors to the 'hospital-town'. Despite being a key symbol in the city, it had become evident that the old hospital was no longer suitable for meeting the needs of the changing population or the requirements of the present-day clinical practice with its widespread demand for efficiency and cost control.

In stark contrast to the spatial concept of the 'medieval town', the new hospital was conceived to resemble a modern metropolis. Following the new criteria for patients' placement envisaged by the patient-centred innovation agenda, hospital wards were designed to be larger and to merge the specialty-based wards. At the heart of the new hospital was a large rectangular area that included four intensive therapies and more than 30 modern operating rooms, all of which were well connected to the surrounding inpatient areas (more than one thousand beds). This spatial design allowed for a quicker access to the most critical clinical services; it also aimed to facilitate care coordination across hospital wards.

The architects in charge of realizing the hospital described it as a "big machine (...) created with a focus on the *human*: patients, visitors, and hospital staff. The central 'plate', where the high-tech equipment is concentrated, is linked with the inpatient and ambulatory areas through direct and accessible paths. Vertical specialized connections, which are rationally distributed, integrate the horizontal paths; these connections together represent the veins and arteries of the new hospital. The paths are ample and well signalled so to ease accessibility to patients, visitors and staff while reducing the anxiety that the huge building may cause. The articulation of the building allows the natural light to reach all patients' areas" (extract from document analysis).

The extract suggests that a very specific interpretation of patient-centredness was put forward in this spatial redesign. By mobilizing the image of an efficient "machine-like" hospital (Verdberber and Refuerzo 2006), emphasis was placed on achieving efficiency (for example, through the functional distribution of patient settings according to their "technological intensity") and securing coordination amongst medical specialties. Patients, however, were not forgotten: since it was acknowledged that the new hospital building could cause some anxiety, effort went into facilitating patient navigation through the hospital.

The innovation was not limited to the structural and architectural components of the hospital were the key; the design of the interiors and its aesthetic qualities were regarded as equally important. The new hospital spaces produced a clear-cut separation between medical spaces and non-medical spaces, similar to the above-cited onstage/offstage approach (Bromley 2012). In an attempt to provide an atmosphere focused on healing rather than disease, much of what makes a building look like a hospital was removed from the eyes of the visitors; treatment rooms, medical equipment and supplies, for example, were hidden on the first two floors behind closed doors. The beautifully designed areas visible to visitors and family members (i.e. the onstage areas) had all the features of "healing environments" (Altimier 2004). Hallways and patient rooms were kept particularly clean and were designed to increase patients' and families' comfort. The rooms were

created to maximize natural light and decorated with flowers and small furniture. Each ward was provided with a living room with comfortable sofas and a TV. Additionally, numerous aspects of the hospital design, from the centralization of the receptions to the positioning of elevators, entrances and exits, followed this onstage/offstage strategy.

However, from a spatial perspective, this onstage/offstage strategy also implied a diminished permeability between clinical staff and patients. Patients were treated in the hospital wards located on the first and second floor, and clinical staff and treatment rooms were kept less visible to family members and visitors. The ground floor of the hospital also contributed to a sense of separation. This was designed to be the 'space for the healthy ones' and was kept separate from both the patient and clinician areas. With its cafeterias, book shops, newsagents, and even clothes shops, the ground floor was also an expression of the commercialization of hospitals (Bromley 2012), taking up wider trends from northern Europe and the USA.

In sum, in conceiving of the new hospital space and providing a material shape to patient-centredness, architects played an active role in the innovation translation, interpreting the PCHM in a very specific way. They linked the PCHM to their own professional standards (i.e. a modernist paradigm) and the wider discourses in design (e.g. the commercialization of the hospital, the creation of 'healing environments' through the focus on natural light). In bringing architects' professional standards and concerns together with those of the hospital managers (i.e. increasing effectiveness through better coordination), the hospital, as a material and spatial artefact, was characterized by a number of tensions. For example, the effort to humanize the hospital though the creation of healing environments co-existed with the attempt to achieve a machine-like, functional efficiency.

As we will show in the following section, the co-existence of these different concerns presents a number of challenges for the frontline clinicians who were in charge of working with the newly created hospital spaces and translating the PCHM into daily work practice. This brings us to describe a third moment of translation, namely when patient-centredness is to become practised in the new hospital space.

2.4.3 Practising and Making Sense of Patient-Centredness in, around and through the New Hospital Space

In this section, we will show how the new hospital space, which was designed to increase patient-centredness, became inhabited and used by clinicians in everyday clinical practice. We examine how the clinical staff made sense of, reacted to, and interacted with, the managerial visions and material interpretations of patient-centredness and how the new 'patient-centred' spaces shaped clinicians' daily work.

2.4.3.1 Reanimating the Lived and Practised Spaces of the Past

The new hospital wards were bigger, allowing the placement of patients with different clinical diagnoses but analogous care needs in the same clinical settings. Flexible multi-disciplinary teams, created ad-hoc according to the skill-mix required by the group of patients located within each ward, replaced the single-specialty clinical teams (which, in the old hospital, were protected by the 'secure walls' of the specialty-based units). Thus, the medical specialties were no longer the linchpin of the hospital organization.

These organizational changes, imposed not least by the new hospital walls, were not always met with appreciation. Various clinicians felt that this shift led to a sense of disorientation amongst patients and their families.

[Conversation with a nurse, surgical ward]

"This is a very impersonal structure; every building is identical to the other. You cannot imagine how much time I spend guiding patients and caregivers throughout the wards while addressing patients' complaints about the difficulty in finding their doctor."

[Conversation with a nurse]

"I was interviewed by a local newspaper a couple of days after the relocation; they asked me what I expected from the new hospital and what I would have liked to see there. I replied that I wanted my fountain back. It was brilliant, it was our point of reference to give indications to

the patients . . . It was very easy to find every ward. You know, this could sound like a silly thing, but we were truly attached to our old hospital and it just seems that it's not the same here . . . "

The absence of the fountain was only one example of the lack of orientation and of practical and symbolic points of reference, as perceived by clinicians. It was felt that the newly built multi-disciplinary areas and the new criteria for patients' placement made it difficult for doctors to 'reach' their patients and for patients to identify their main carers. In the new hospital, the patients who were under the care of a single doctor were often located in different hospital wards. Accordingly, it was suggested that this could lead to patients being 'forgotten' or receiving less attention (and thus a poorer quality of care) than in the previous hospital model.

[Conversation with a surgeon]

"I never quite know where I can find my patients, because they are now located on two different floors. Through this approach, patients become kind of almost orphans . . . We are responsible for them, but we cannot have everything under control if they are spread all over the hospital. I just don't get it: how exactly should this enhance the quality of care?"

Some frontline clinicians initially felt that the multi-disciplinary wards and their "impersonal structure" were unsuitable to develop good care practices and to nurture a stable care alliance between doctors and patients. For example, one physician suggested that patients' main need was to develop a trusting relationship with the doctors and nurses in charge of their care process and that the new 'merged' multi-specialty wards did not allow for the development of such a relationship.

[Conversation with a physician]

"I am aware that times have changed, that we have to deal with more external pressure . . . But patients and families haven't changed! They need a unique point of reference. They need to identify 'their' doctor, they need to know where they can find us. And since our offices are now far away from their rooms, and patients are hospitalized in this new broad areas where they treat everything – from the stomach to the brain! – patients feel lost. (. . .) They need to be able to identify their safe house and their trusted host, do you know what I mean?"

The possibility for patients to identify their doctor was of material and practical relevance (i.e. finding the doctors/patients, monitoring the patients). It was argued that in order to create a healing environment, a stable point of reference was necessary – in the form of responsible consultant or clinician – so that patients could "identify their safe house and their trusted host".

In view of these concerns, the clinical staff started to work around the new physical spaces and affixed handwritten signs to the patients' rooms of the new multi-disciplinary wards to indicate which rooms belonged to which doctors (and to which medical discipline). These signs are a powerful illustration of how the former, yet still engrained, ways of organizing the hospital (the former practised and lived space) acted upon the newly imposed structure. Just as the nurse made sense of the new space in reference to the former hospital – nostalgically remembering the past spatial organization using the fountain – so the practised and lived space of the former hospital (with its specialty divisions) informed the perceived space of the new hospital, namely how its spaces were to become practised. We even observed few occasions when clinicians reinstated, despite the spatial arrangement, the previous criteria for patient placement, as this was felt to be consistent with patients' wishes and preferences. The following excerpt shows an example of such an event:

[Conversation with a nurse]

"See, this patient had to have surgical staples removed. Theoretically, she should have it done in the centralized day-hospital setting, where she could have found any surgeon that is doing the shift there . . . But this patient had a very complex surgery, she is really scared . . . She developed a relationship of trust with her surgeon and she asked specifically for him to remove the staples. So, I told her to come here at 5 o'clock and to wait for him . . . To me, it's the most obvious thing to do . . . but the senior managers would blame me for this . . . "

These examples show that frontline clinicians initially 'practised' the hospital space as a way to re-materialize the functional boundaries of their professional specializations characteristic of the old hospital, thus creating intricate overlays of the perceived and lived spaces of the past to inform how the new spaces were to become perceived and lived.

They also show that the clinicians started to practise and live the new spaces by weighting upon the controversies materialized by managers and architects. In particular, they resisted the discourse that the new building was useful for a human-centric care and an integrated clinical service. They did this both materially (for example, through the hand-written signs described above) and discursively. For example, the two floors hosting the wards were often referred to as "the Towers", to evoke the inaccessible spaces dedicated to specialists, whilst the ground floor, i.e. the space for the "healthy people", was rebranded as "the Mall". Notably, although labels as "the Towers" and "the Mall" initially highlighted staff affective distance towards to the new hospital, they soon became a familiar reference point for both patients and carers, similar to the old fountain.

2.4.3.2 New Spaces for Reflecting on Clinical Practice

Despite (or as we shall see also because of) the initial resistances, the presence of the new spaces in some cases was perceived not only as a limitation, but also as a resource. With time, some clinical staff pointed out that the connections and inter-disciplinary encounters generated by the new physical arrangements created an unexpected and productive generative force. The constraints that the clinicians initially experienced led to different and more frequent communications, enabling knowledge sharing, cross-disciplinary consultations, and increased collaboration.

[Conversation with a physician]

"For sure it was hard at the beginning, (. . .) But I started noticing new and better integration here! The new space is slowly contributing to unify our work and to create new knowledge flows. In the old hospital we simply never met. If you wanted to ask for a specialist opinion you had to make a phone call. (. . .) I think now we just bump into each other more often, and this simply didn't happen in the old hospital (. . .) to be three of us from different disciplines consulting on the same case at the same time. We are making progress I believe."

[Conversation with another physician]

"What we have to do now is to engage in communicating more and in a better way. We are forced to make this effort with these new walls.

We ask for colleagues' consultancy and help more often than we did before."

It is interesting to note how the physicians explicitly point to the agency of the newly created space and its ability to generate new collaborative practices (see especially the expressions, "The new space is slowly contributing to unify our work" and "We are forced to make this effort with these new walls"). Constrained by new "walls", clinicians were no longer able to organize themselves as they had before, and were therefore forced to reflect on how to work with and live in this new space. This, in addition to the fact that they "bump[ed] into each other", allowed for new forms of collaboration and reflection, which, in turn, prompted unforeseen considerations of what "putting the patient at the centre" meant in daily clinical practice possible.

[Conversation with a nurse]

"I don't know whether it's being in a new hospital, but we have started to interrogate ourselves more often upon what we actually aim to do here. (. . .) And probably, rather than focusing on how to make them [the patients] feel 'at home' here we need to work on letting them go to their actual home sooner!"

By reflecting on the challenges of making patients "feel 'at home'" and of providing a healing space, the clinical staff started to consider how best to do this, which resulted in them endorsing one of the main managerial slogans of the PCHM, that is, the need to guarantee a shorter hospital stay. In doing so, practitioners endorsed specific aspects of a management innovation and obtained expected results, e.g. shorter hospital stays as a result of patient-centredness. And yet, how such results were obtained (and what they meant to practitioners) was far from a linear process. Considering the agencies of the conceived, perceived/practised and lived spaces of both the former and the new spaces enabled us to uncover, and provide an interpretation for, the dynamics underpinning this process.

2.5 Discussion

Our analysis focused on the role of organizational space in translating patient-centredness into healthcare practice. The results showed that the local translation of an innovation into daily practice is a) an intricate,

non-linear process characterized by a number of controversies and b) actively shaped by organizational space (i.e. its materiality as well as its practised and lived qualities, which are subject to important temporal dynamics).

2.5.1 Controversies Act throughout the Innovation Translation Process to bring Novel Solutions into Use

Our study supports the Actor Network Theory idea that for an innovation to gain the necessary support (not only globally, but also within a specific organization), the innovation must maintain a certain ambiguity and malleability so that multiple concerns and interests can be attached to it (the phase Callon (1986), calls "intéressement"). In our case, a number of different and, to some extent, controversial concerns became associated with the patient-centred innovation, such as overcoming disciplinary silos to achieve a more effective coordination (the managerial agenda) while providing a human-centred, healing atmosphere and creating dedicated spaces for leisure by clearly separating families and visitors from medical activities (the architects' and designers' agenda). Contrary to the idea of following the phase of intéressement, the controversies around an innovation gradually became resolved as the innovation became stabilized (e.g. through its materialization in objects) (cp. Czarniawska and Sevón 2005; Latour 1987). Our study suggests that controversies continue to animate the translation process even once ideas and approaches of patient-centredness have been "cemented in stone".

Various sociomaterial factors can explain the continuous presence of controversies. On the one hand, they are not only the result of the deliberate work of human actors (e.g. hospital managers, architects, doctors, nurses, ward managers) involved in the translation process. Rather, multiple concerns are worked into the organizational space, often without practitioners being fully aware of their conflicting potential (e.g. architects following professional standards that contain reminders of a modernist architecture implicitly subscribing to notions of efficiency/functionalist machinery). In addition, when starting to

practice within the newly created space and trying to make sense of it, controversies may be re-calibrated differently, as practitioners may need to rearrange their practices around and with the materiality of the new space, which may make other controversies come to the fore. For example, the felt division between healthy and sick people in view of the new experience with "the Mall" gave a different spin to the controversy regarding the distance between the clinical team and the patient/family. Similarly, controversies evolve through practitioners' continuous practical and discursive engagement, such that what once caused irritation (e.g. patients become "orphans" if they no longer belong to a single doctor) may become lived as a productive arrangement (e.g. a collective, multi-professional entity may become a carer for a patient) until eventually new concerns become attached to the issue leading to new controversies (e.g. litigation of clinical responsibility around adverse events).

With controversies being continuously re-presented and only locally and momentarily stabilized, the translation of patient-centredness into healthcare practice needs to be conceived as a collective achievement that is reiteratively renegotiated not only between patients and multiple health providers, but also within an evolving network of practices and relationships that are woven together through the material and immaterial resources available, and of which organizational space is an important part (cp. Liberati et al. 2015).

We hope that such theorizing of controversies within the innovation translation process allows for overcoming traditional reflections upon resistances to change (cp. Piderit 2000). For example, rather than understanding the clinicians' initial sentiment of nostalgia for the former hospital, building their sense of disorientation as a form of passive resistance to the on-going change, we have shown that by discursively relating the new space – even if critically – to the "lost space" of the former hospital (Petani and Mengis 2016), practitioners were able to make sense of the new space and find ways to practise it. The sense of loss made it evident to practitioners that they had to develop new reference points, both discursively and materially (e.g. "the Towers", "the Mall", the handwritten signage on doors) to make the new place practicable and meaningful. Similarly, due to the perceived spatial separation between the sick

and the healthy, clinicians had to find ways to work more closely with patients and their families. In this way, controversies acquired a productive quality in the translation process to develop ways to make patient-centredness a workable solution that could be effectively brought into use in the very specific context of this hospital.

2.5.2 The Translation of an Innovation is Constantly Shaped by an Intricate Dance between Space (Perceived/Practised and Lived) and Time

A second contribution of our study relates to the roles of organizational space in the local translation of innovations. Our findings suggest that the specific way in which a bundle of innovative ideas and approaches – such as patient-centredness – is materially translated into a spatial arrangement affects how an innovation is "brought into use". If the process of 'enacting' patient-centredness gives prominence to achieving cross-specialty integration and a machine-like efficiency, then other aspects of patient-centredness may become more difficult to attend to, such as giving weight to the emotional well-being of the patient and other aspects of "residentialism" (Verdberber and Refuerzo 2006). The clinical team will have to work determinedly and creatively around the newly constructed walls. Conversely, organizational actors can consider and understand the implications and specific affordances of the innovation only when the bundle of innovative ideas regarding patient-centredness gains a specific material form.

While these aspects make a strong argument for the relevance of the material properties of the spatial arrangement, the triad of Lefebvre (1991) is a constant reminder that organizational space is much more than a relatively stable container defined by its geometric, physical extension (Taylor and Spicer 2007). The triad of the conceived, perceived and lived space makes it possible to acknowledge that while the materiality of the conceived space had a certain domineering role (e.g. it forced clinicians to abandon functional divisions as their main mode of organizing), the new spatial arrangement had an equally important processual and open-ended quality being subject to new (re-)appropriations. Our study emphasizes the constant interplay between

the "perceived" and the "lived" space (Lefebvre 1991: 27), meaning that the practical efforts to inhabit the new hospital and make it workable in practice (i.e. perceived space) depend upon how doctors, nurses and hospital managers make sense of the latter (i.e. lived space). This lived space, in turn, informs how practitioners will continue to engage with the space when developing their practice. For example, although certain new spatial arrangements (e.g. getting rid of functional wards) were experienced or "lived" by the clinicians with a sense of disorientation or as an attack to their professional power and sense of identity (cp. Knights and Willmott 1989; Leonard 2003; Nugus et al. 2010), clinicians also attempted to rearrange and regain possession of the hospital space. Over time, these newly "perceived/practised" spaces raised new possibilities for inter-professional collaboration and knowledge sharing (Atwal and Caldwell 2002; Powell and Davies 2012; Wenger 1998).

Interestingly, the interactions of conceived, perceived and lived spaces were subject to relevant temporal dynamics. While clinicians initially associated the material spaces of the present with the "lost" spaces of the past (both lived and perceived) (Petani and Mengis 2016), this temporal connotation evolved as space became inhabited through practice. With practitioners having found ways to practise the new space, they no longer reverted to the past to make their spaces meaningful; instead, they were able to orient the perceived space of the present to future opportunities.

The role of space in questioning the habitual site of practice enhances the possibility of inhabiting the future of innovation, thus questioning 'taken-for-granted' ways of practising and working. Space, associated with the 'right time', is thus able to install a meta-space for reflexivity, thus also representing a trigger for potential learning.

2.6 Conclusion

This chapter examined an innovation that has gained particular prominence in recent healthcare reforms, i.e. the shift towards patient-centred care. Drawing data from an ethnographic study, we discussed the spatial translation of the innovation, that is, the process through which a multi-specialty hospital was re-designed and re-built to adopt the new care

paradigm. We have shown that while multiple controversies were at play, both at a global level between multiple discourses regarding hospital and health management (e.g. discourses of efficiency, of residentialism, commercialization, etc.) and at an organizational level between multiple professional groups (e.g. hospital managers and clinical staff), the 'spatial translation' of the idea of patient-centredness was equally important to understand the innovation process. We discussed how different aspects of the organizational space influenced the ways in which the idea of patient-centredness was translated into practice. These aspects included the architectural trends and style that informed the hospital design, new material 'walls' that shaped the hospital wards, and the way in which such material space was experienced and lived by various organizational actors (patients, hospital staff, and family members).

In sum, we propose that the patient-centred innovation in healthcare is underpinned by the interplay of materiality and practice and is nurtured by an enduring tension between the two. Such tension is generative and never-ending and allows innovations to expand and to become meaningful for an organization. Organizational space (including its material, symbolic, practised and lived qualities) can be considered as an actor itself, which can either increase or attenuate the controversies at play when translating innovative ideas into practice.

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